



National Weather Service Spring Flood Outlook

David Pearson, Service Hydrologist
National Weather Service – Omaha, NE
February 27, 2020



Welcome



- Thank you for coming.
- Don't forget to take home some handouts.
- We could use river observers, especially for ice jam monitoring. Sign-up after the meeting if interested.





Our goal for this meeting



- Provide the latest information related to the upcoming flood season.
- Provide everyone with resources to stay informed beyond this meeting.





Before we get started



NEBRASKA STRONG
RECOVERY PROJECT

Facebook.com/NebraskaStrongRecoveryProject

FREE & CONFIDENTIAL

Nebraska Rural Response Hotline
1-800-464-0258

National Disaster Distress Helpline
1-800-985-5990



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Our goal for this meeting



- This meeting is not meant to provide a final answer on the spring flood threat.
- Rather, the goal is to empower you with information and preparedness in the days and weeks to come.





Flood Preparedness



- Consider improving how you get weather updates and start monitoring conditions on a regular basis.
- Have multiple ways to get information.
- Contact your county Emergency Manager as needed.





Levee Repair Status



- For the latest on levee repairs, reference the following website:
- <https://www.nwo.usace.army.mil/Omaha-District-System-Restoration-Team/>





Brief March Flood Review



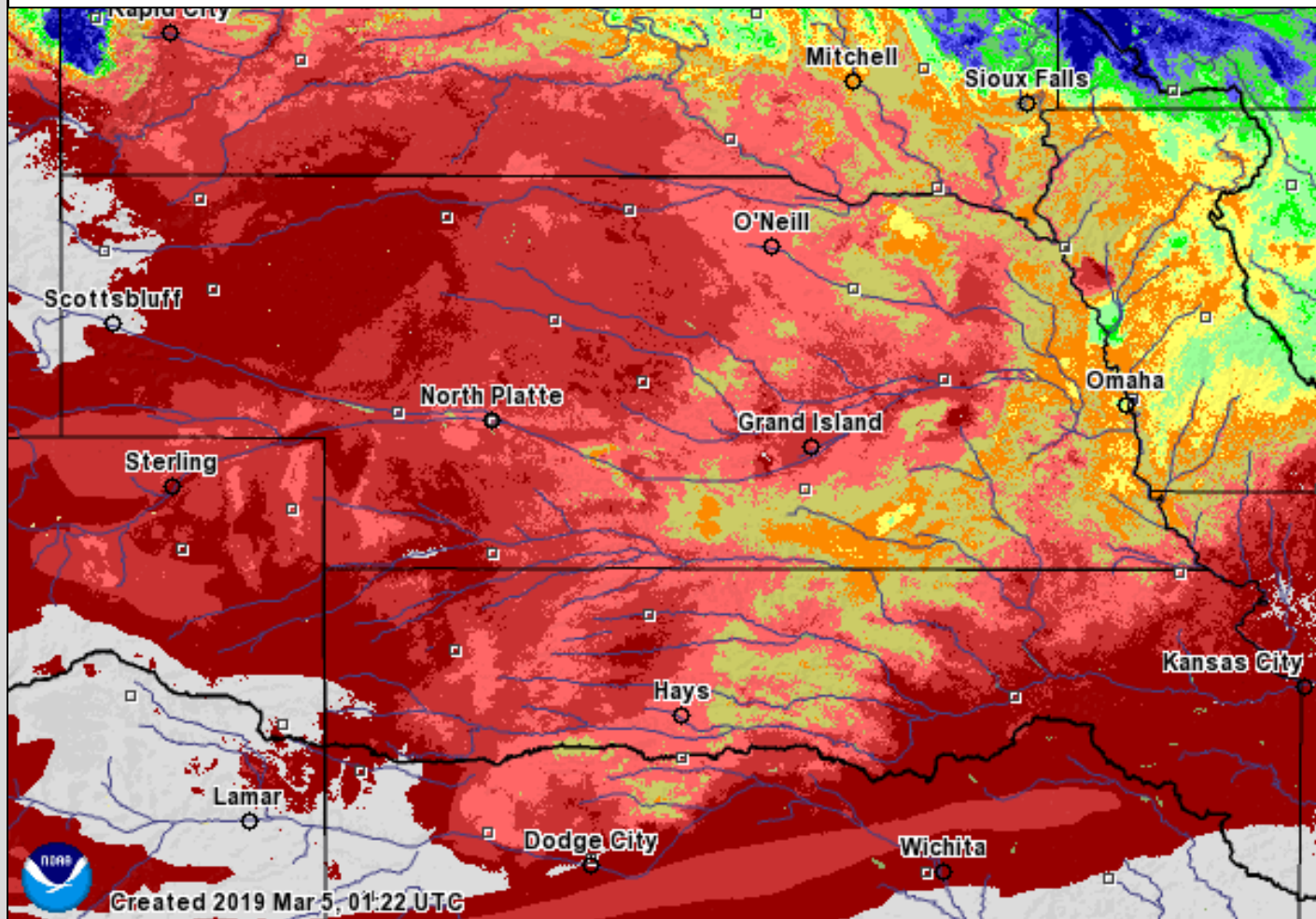
What is there left to say?



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Brief March Flood Review

Snow Depth on March 4th, 2019

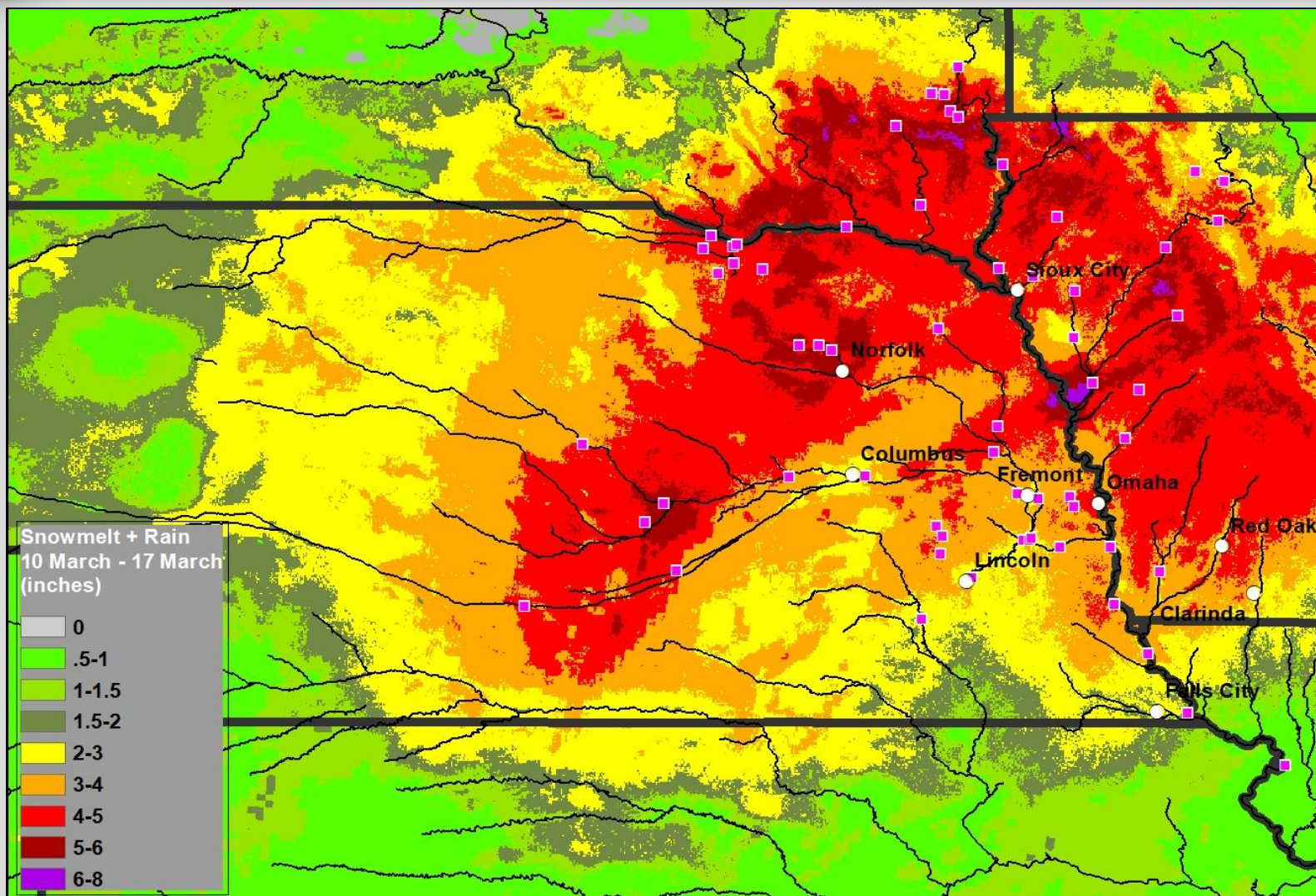


Inches of depth





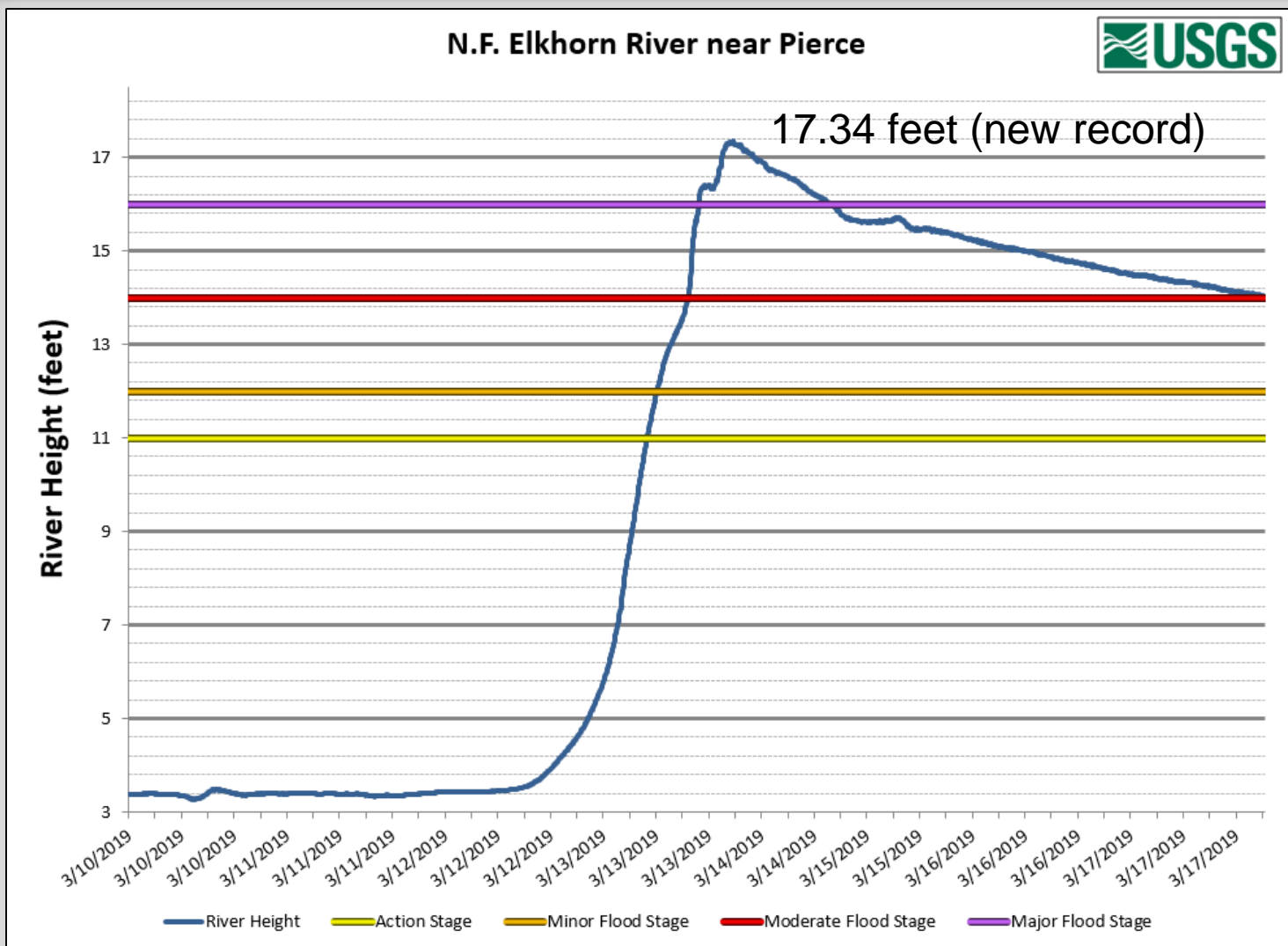
Brief March Flood Review



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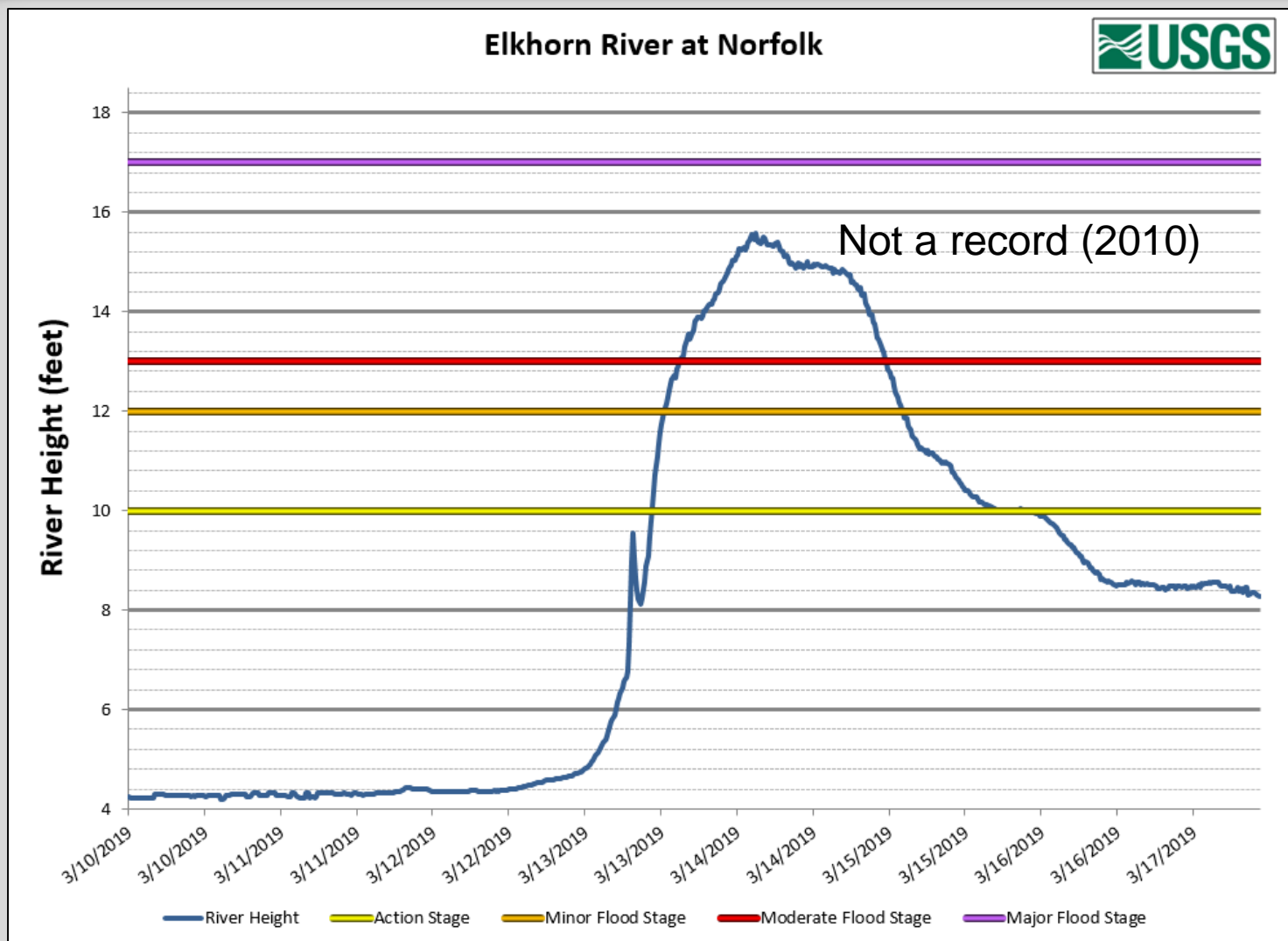


Brief March Flood Review





Brief March Flood Review

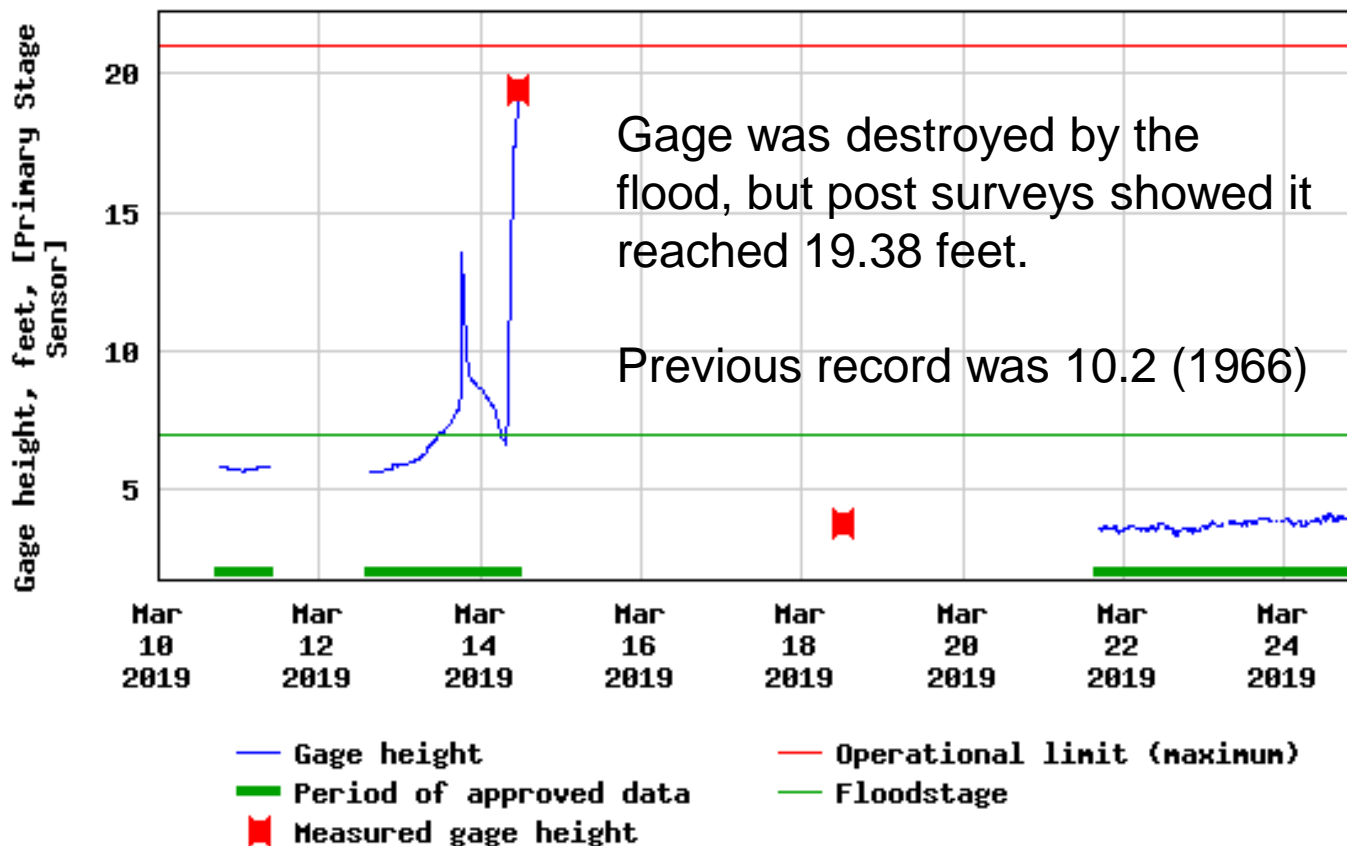




Brief March Flood Review



USGS 06465500 Niobrara River near Verdel, Nebr.





Bottom Line for March 2019



- One factor alone wouldn't have been enough to create that flood. We needed:
 - Deep snow
 - Frozen ground
 - Heavy rain
 - Thick river ice





The Flood Risk for 2020





Spring Flood Outlook Factors for 2020

As of February 27th



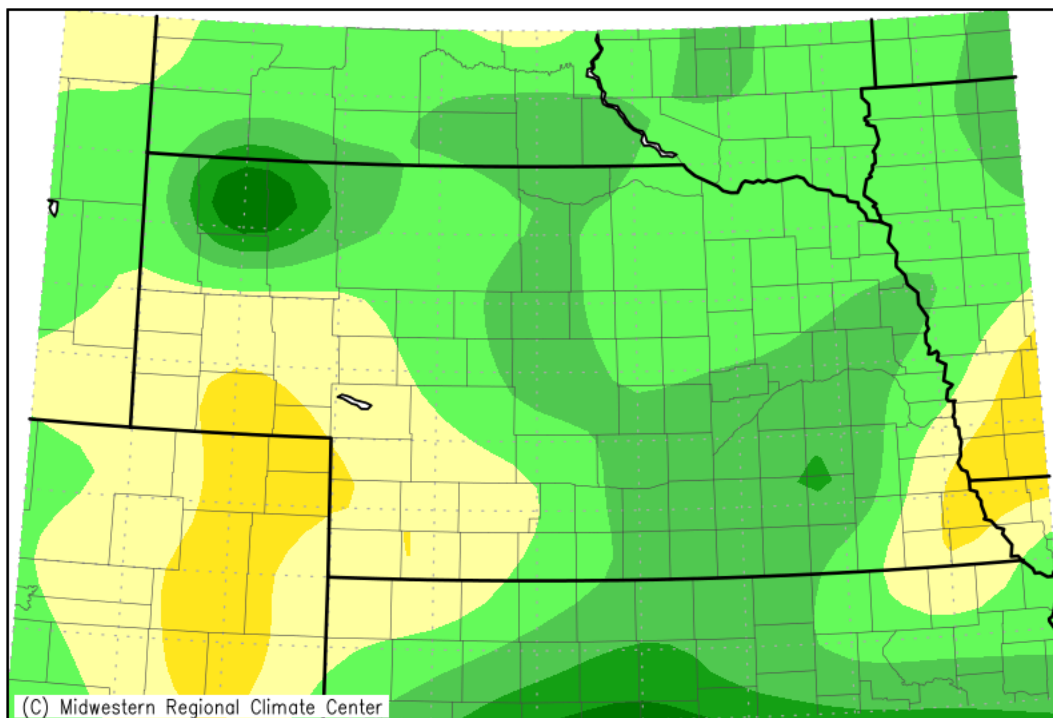
Flood Risk Contribution Factor	Contribution to Flood Risk
Snowpack (Plains)	Below-Normal Risk
Snowpack (Mountains)	Normal Risk
Soil Moisture	Above-Normal Risk
Frozen Ground	Below-Normal Risk
Amount of water in the river	Much Above-Normal Risk
Precipitation Outlook	Normal Risk
Ice Jams	Below-Normal Risk



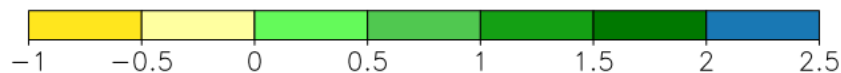
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Winter Precipitation (so far)

Accumulated Precipitation (in): Departure from Mean
December 1, 2019 to February 25, 2020



Mean period is 1981–2010.



Midwestern Regional Climate Center



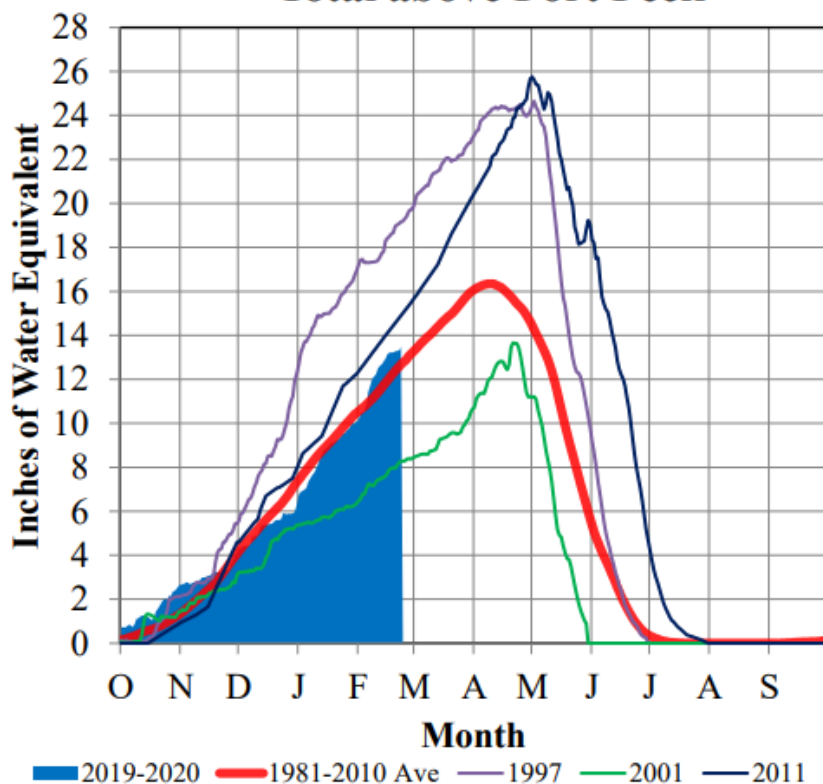
Current Mountain Snowpack



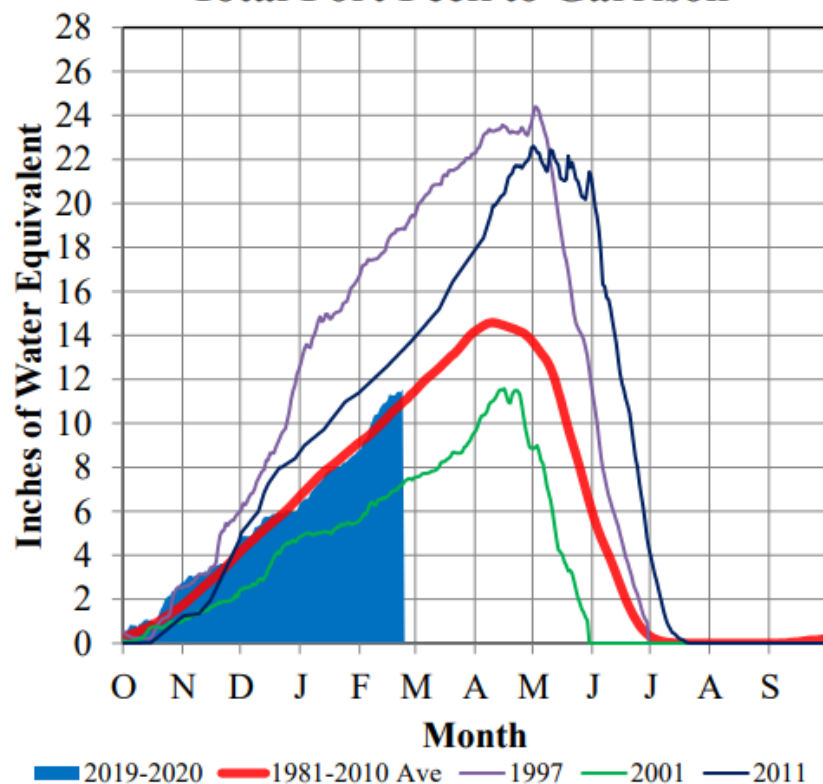
Missouri River Basin – Mountain Snowpack Water Content 2019-2020 with comparison plots from 1997*, 2001*, and 2011

23-Feb-2020

Total above Fort Peck

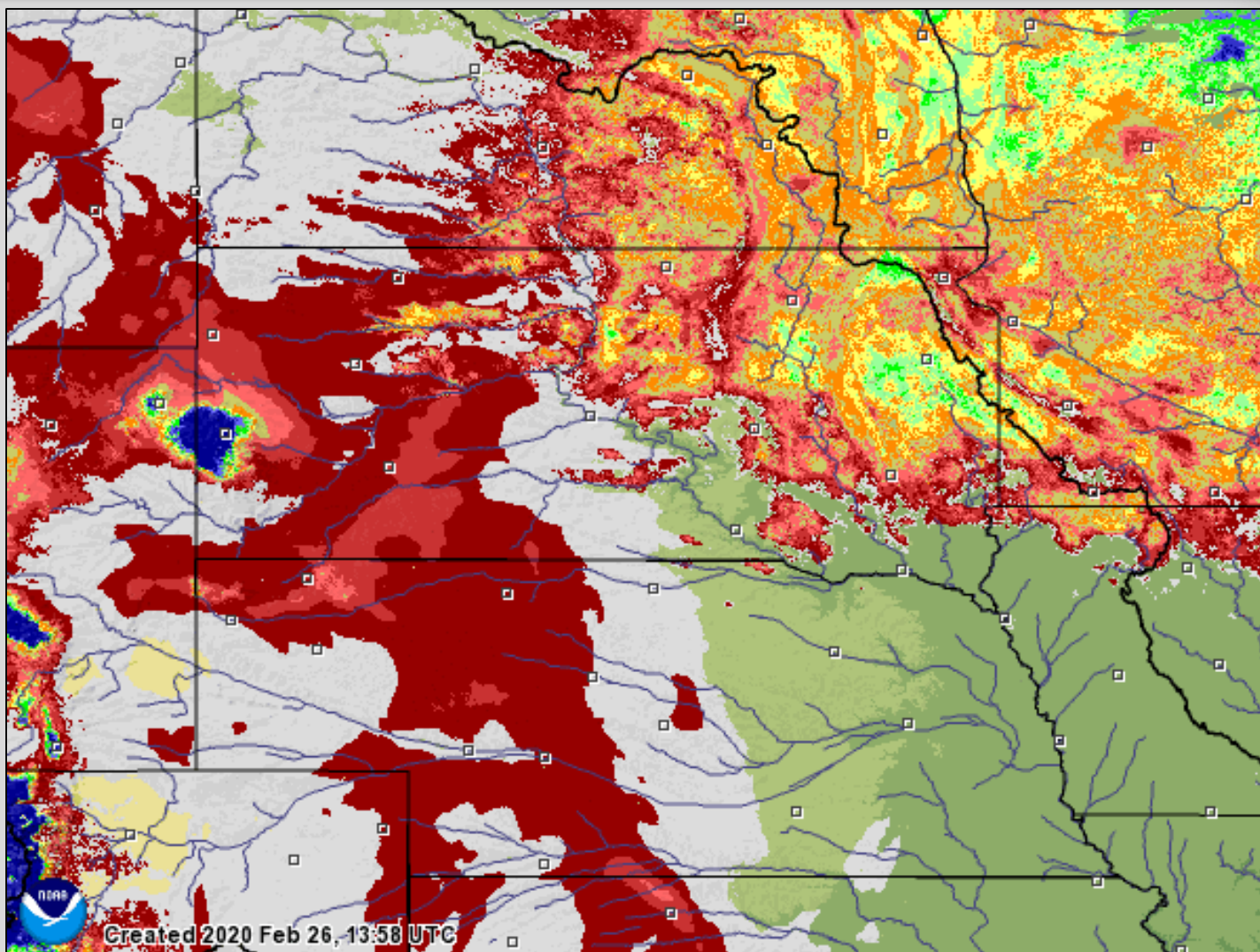
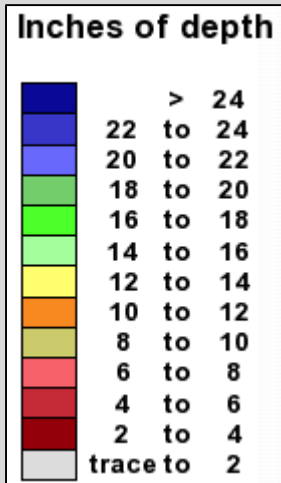


Total Fort Peck to Garrison





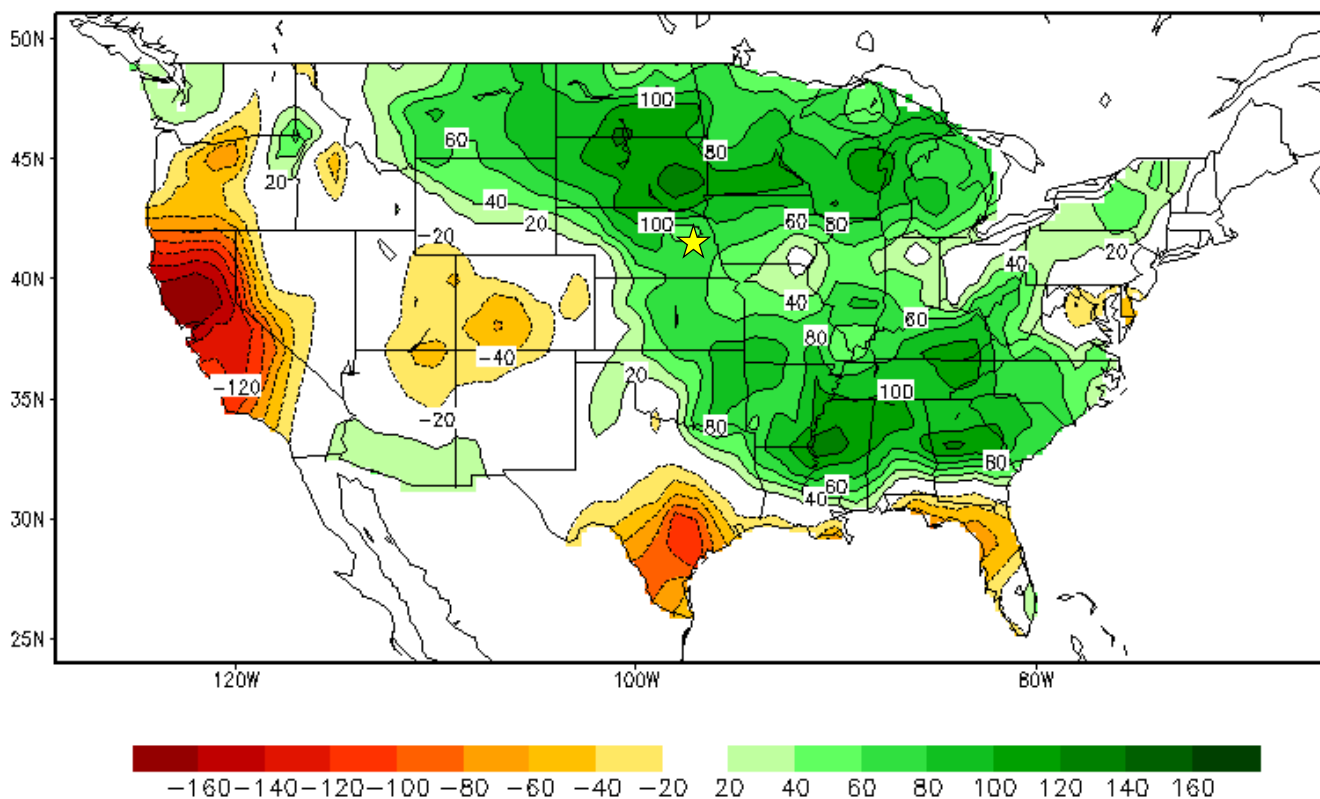
Current Plains Snowpack



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Current Soil Moisture

Calculated Soil Moisture Anomaly (mm)
FEB 24, 2020

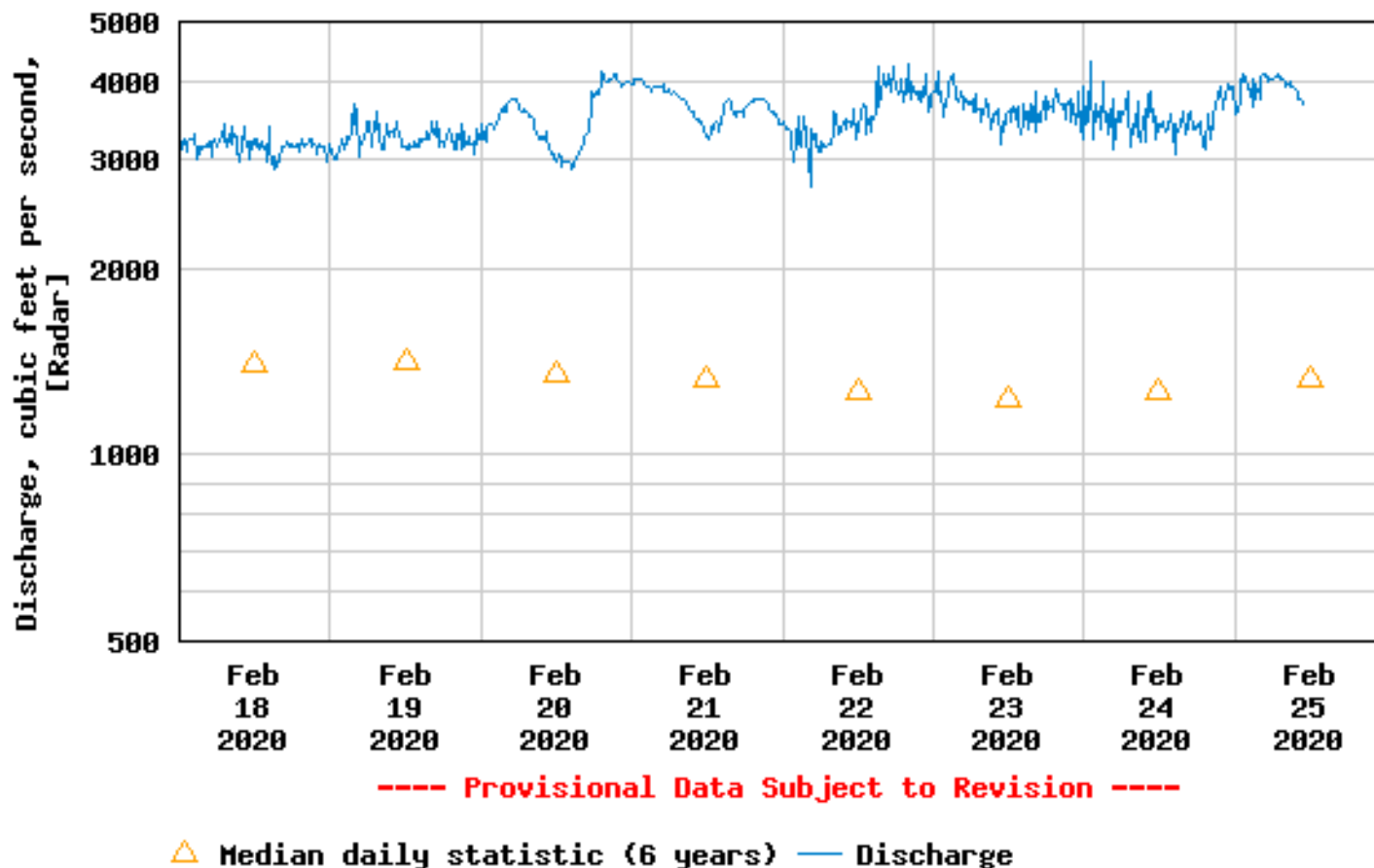




Amount of water in the river



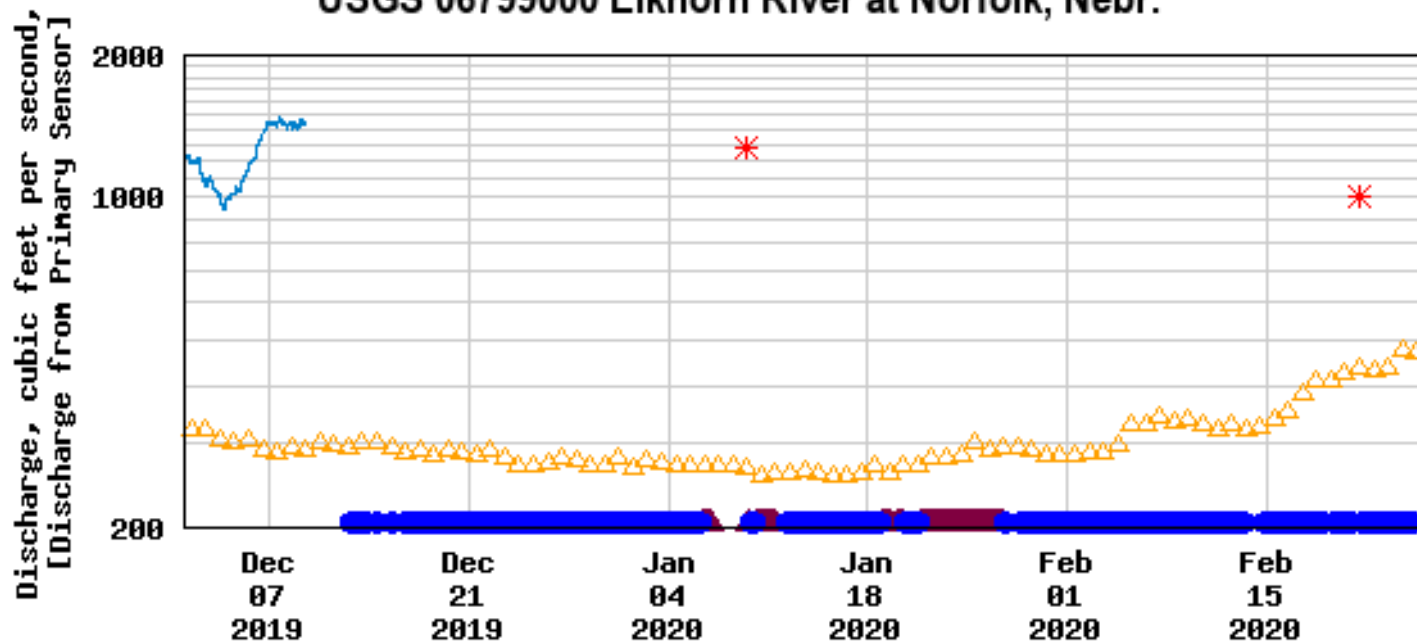
USGS 06463720 Niobrara River at Mariaville, Nebr.



Amount of water in the river



USGS 06799000 Elkhorn River at Norfolk, Nebr.



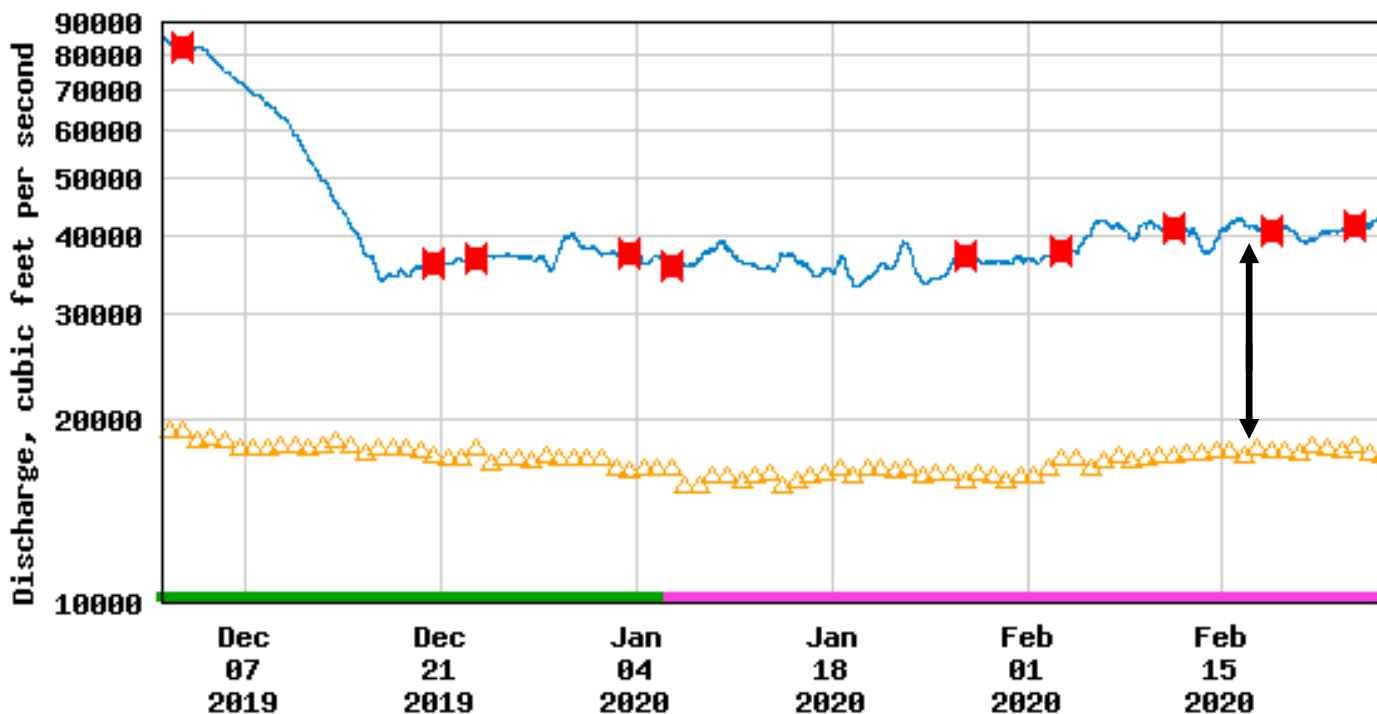
---- Provisional Data Subject to Revision ----

- △ Median daily statistic (74 years)
- Discharge
- ▲ Value affected by equipment malfunction.
- Value is affected by ice at the measurement site.
- * Measured discharge

Amount of water in the river



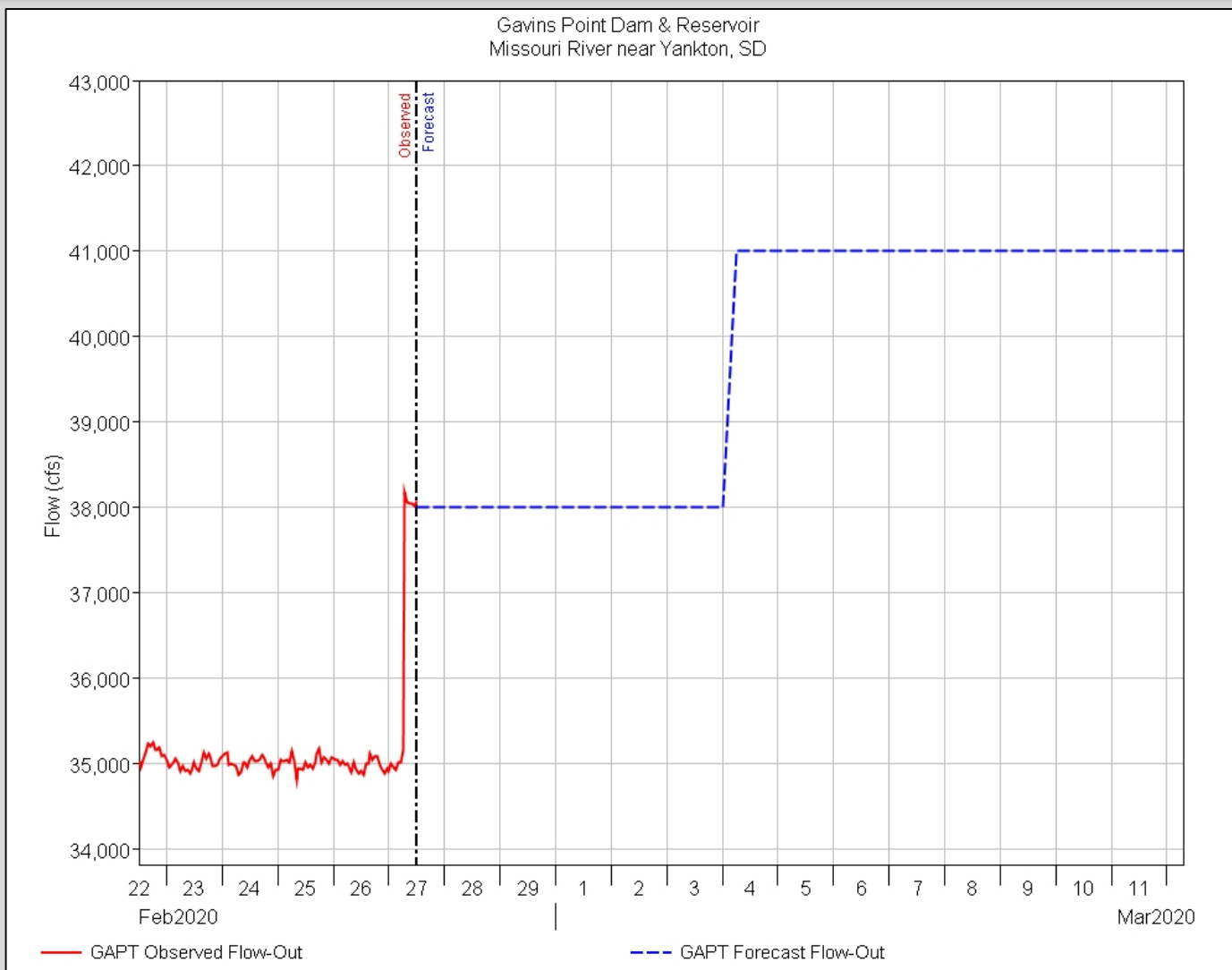
USGS 06486000 Missouri River at Sioux City, IA



- △ Median daily statistic (67 years)
- Discharge
- Period of approved data
- Period of provisional data
- Measured discharge



Gavins Point





River Ice Conditions



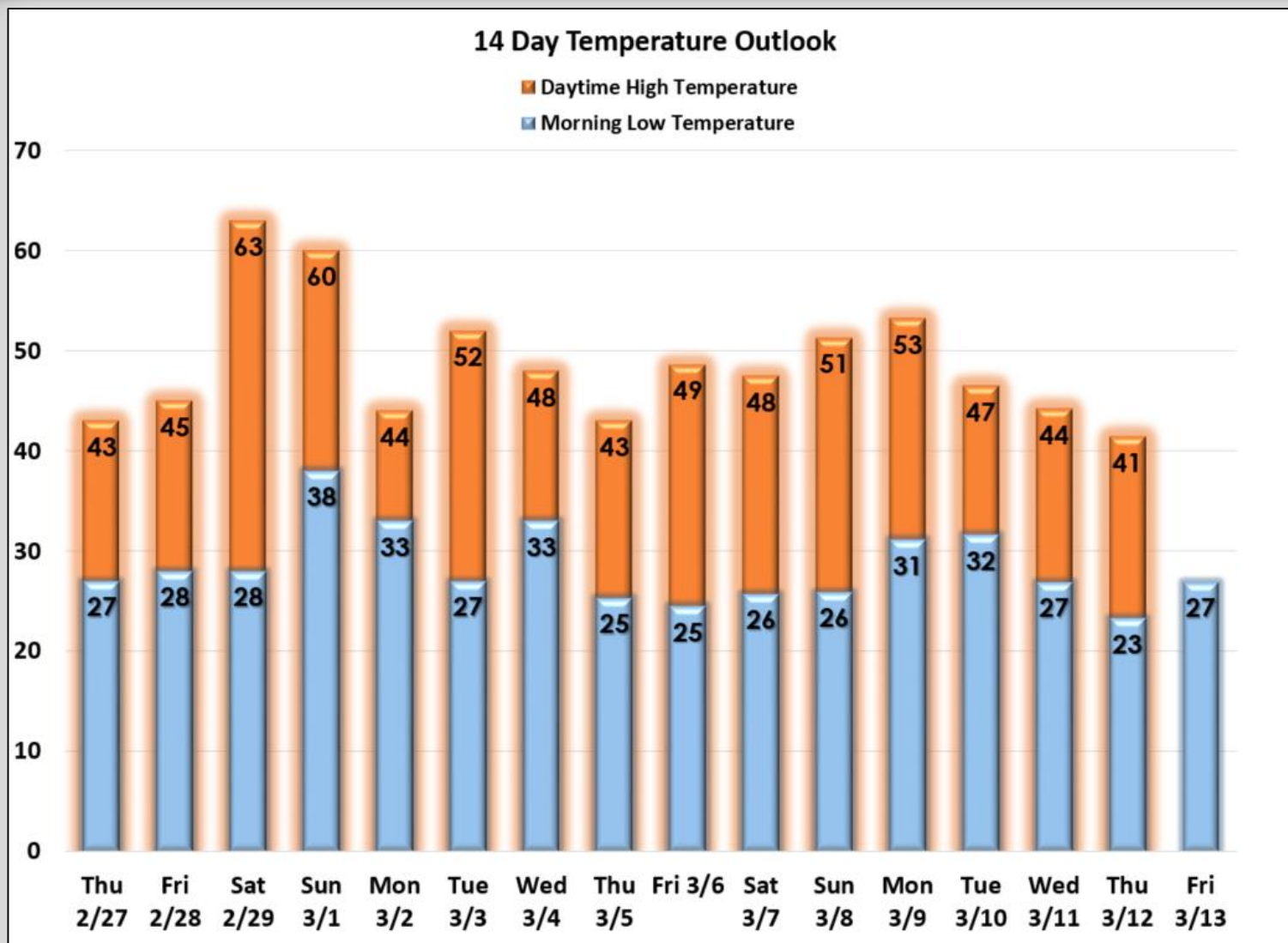
Some ice remains along the Elkhorn River near Tilden

Other areas to watch are the Niobrara River as there are typically ice issues there each year.

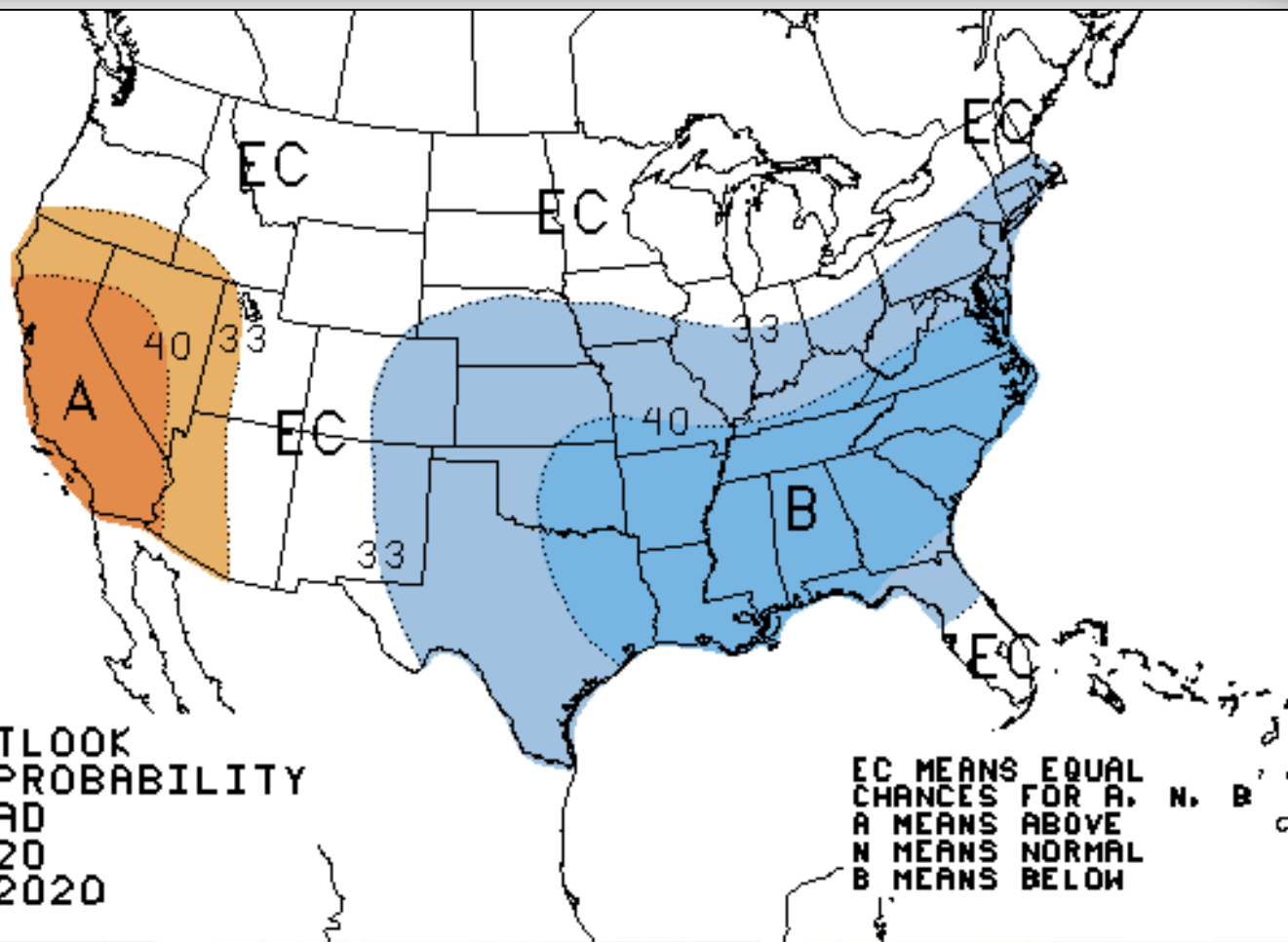
No reports to confirm ice thickness or coverage.



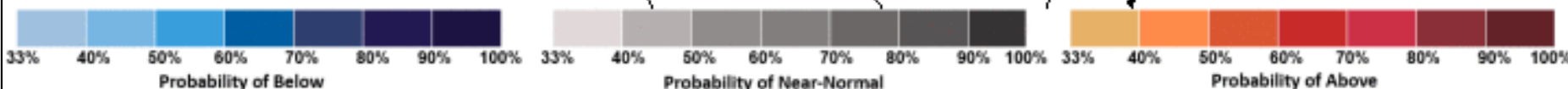
Temperature Outlook (Short Term)



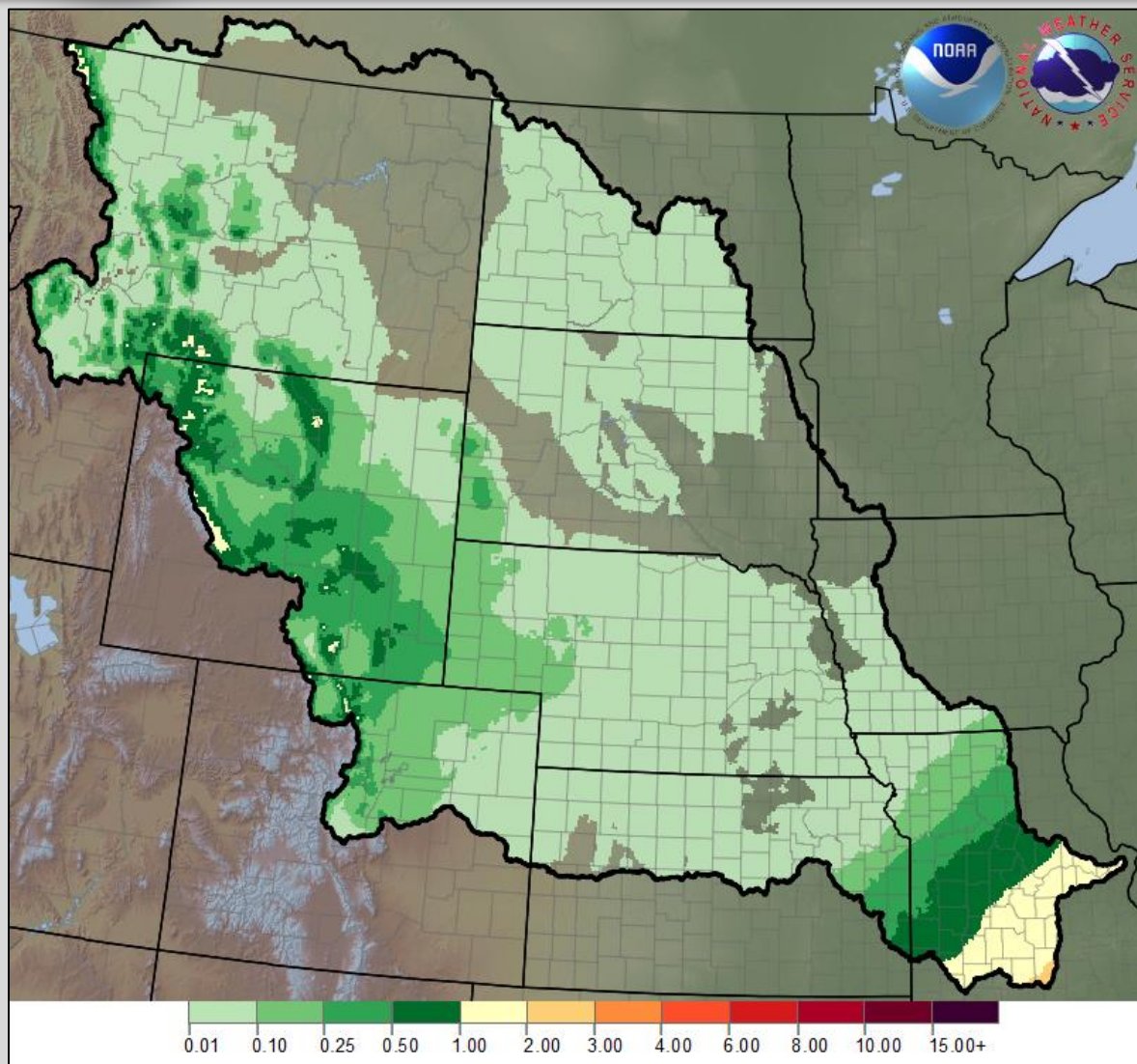
While March may start warm, the trends show it could end below normal.



ONE-MONTH OUTLOOK
TEMPERATURE PROBABILITY
0.5 MONTH LEAD
VALID MAR 2020
MADE 20 FEB 2020



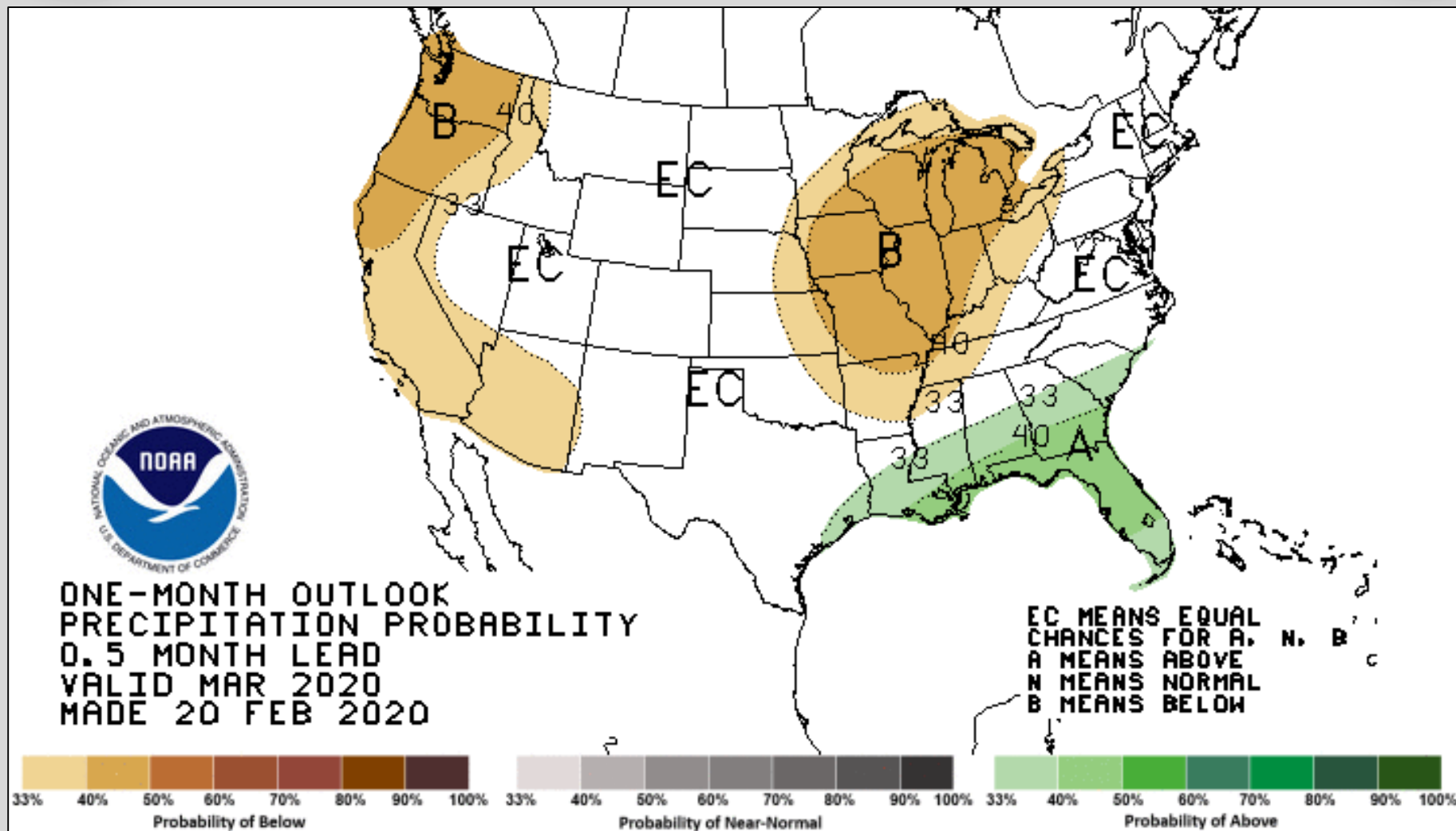
7 day Precipitation Outlook



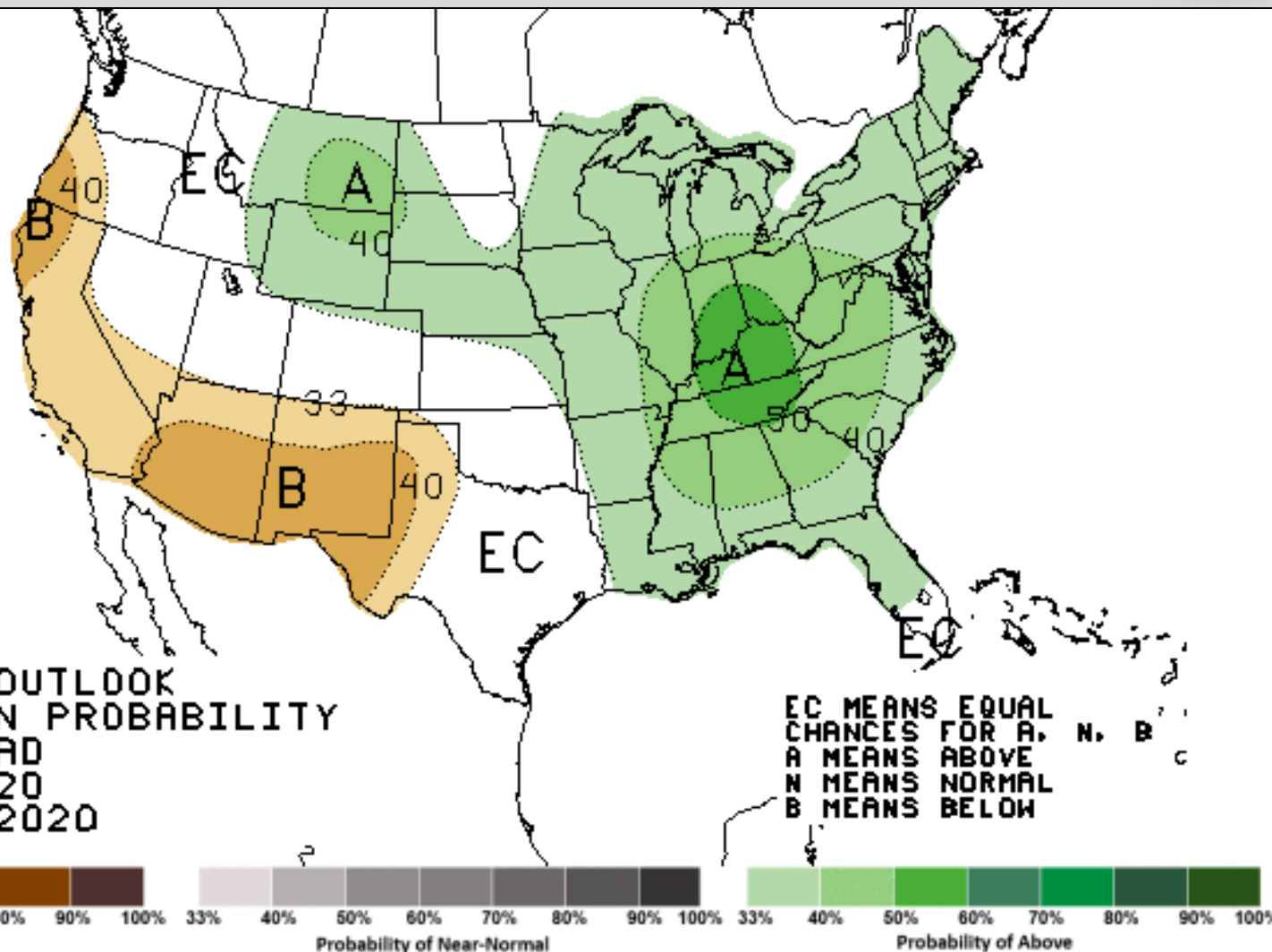
- For the next several days, precipitation is focused well away from northeast Nebraska.



Precipitation Outlook (rest of March)



Recent trends show precipitation could be above normal beyond March.



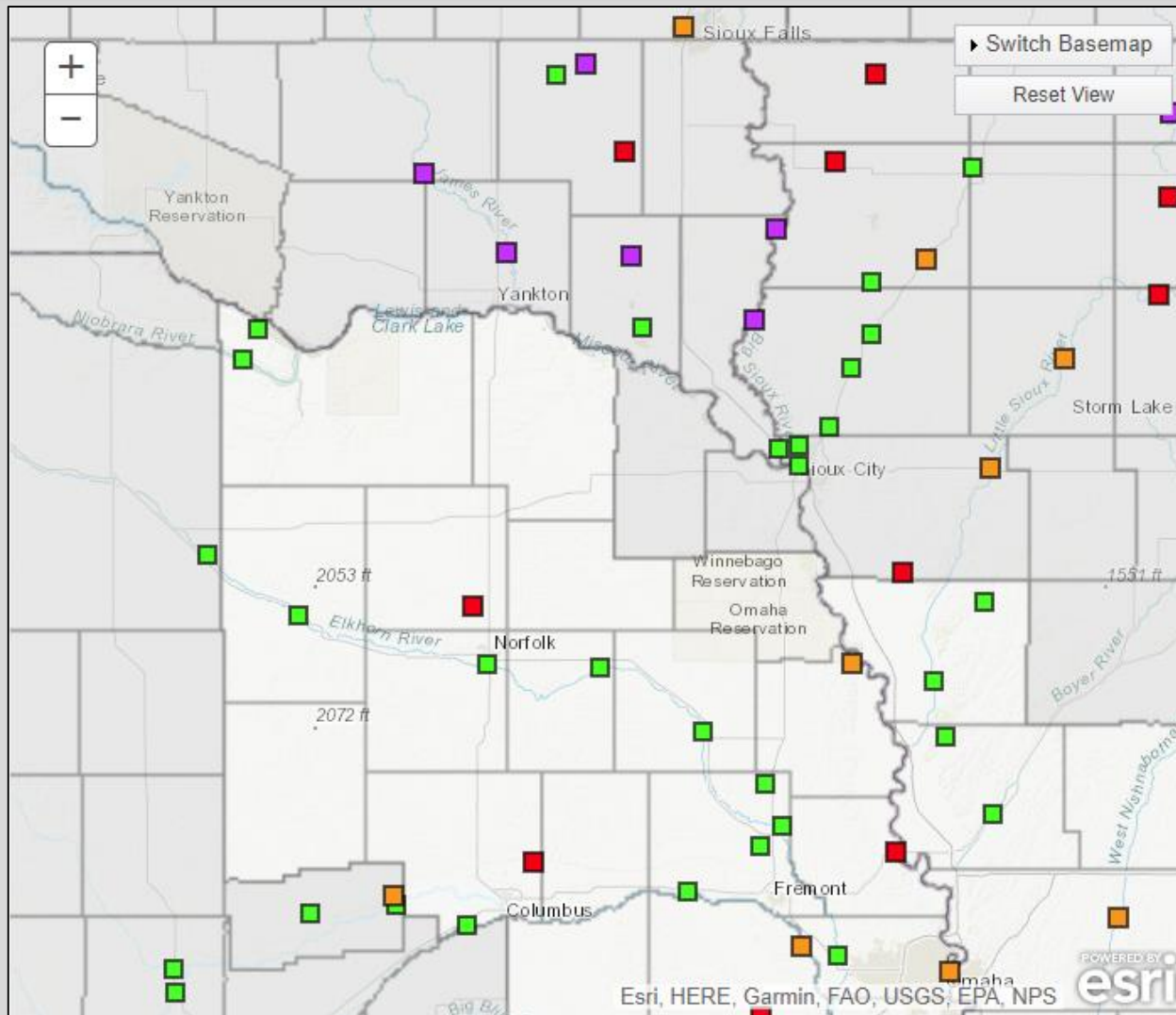
Flood Outlook

Increased Risk
for Major
Flooding

Increased Risk
for Moderate
Flooding

Increased Risk
for Minor
Flooding

Normal Risk for
Flooding





Summary



- **Overall flood risk this spring:**
 - There is an above-normal risk for flooding this spring.
 - This year the magnitude of flooding will greatly depend on:
 - Location and intensity of spring rains.





Next Steps



- Our is plan is to provide updates on:
 - Feb. 27th - this is already on our website
 - Mar. 12th
- All updates will be posted to weather.gov/omaha





Upcoming Meetings



- **5 March – Sidney, Iowa**
- **11 March – Bellevue, Nebraska**

<https://www.weather.gov/oax/springfloodmeetings>



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Thank You!!



National Weather Service Spring Flood Outlook



For questions & additional information:



Find us on
Facebook

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